

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION (PCT Article 36 and Rule 70)

REC'D 17 FEB 2004



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Applicant's or agent's file reference P/62303/u18		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 02/05721	International filing date (day/month/year) 17.12.2002	Priority date (day/month/year) 04.01.2002	
International Patent Classification (IPC) or both national classification and IPC H04J14/02			
Applicant MARCONI COMMUNICATIONS LIMITED et al			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.  
  
☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  17.07.2003	Date of completion of this report  16.02.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Chauvet, C  Telephone No. +49 89 2399-7090  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB 02/05721**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-3, 5-7 as originally filed  
4 filed with telefax on 06.02.2004

**Claims, Numbers**

1-8 filed with telefax on 06.02.2004

**Drawings, Sheets**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-8
	No: Claims	
Inventive step (IS)	Yes: Claims	1-8
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**1. Technical field**

The subject-matter defined by independent claims 1 and 5 is directed to the addition of an n-channel DWDM signal to an n-channel DWDM network.

**2. Closest prior art**

Documents D1 (US6288810; Figure 8 and description thereof) and D3 (EP1156607; Fig. 11) disclose an optical network node for an n channel DWDM optical network, the node comprising an add path for adding a n-channel wavelength multiplex onto the network, in which some of the n channels carry signals to be added onto the network, wherein the add path comprises an n-channel signal combiner for combining the n signal channels, an optical amplifier for amplifying the output of the signal combiner, and an add coupler for coupling the add path to the network.

**3. Novelty**

None of the prior art documents cited in the International Search Report shows a multichannel wavelength selective filter with variable per channel attenuation for blocking channels not carrying signals to be added to the network or controlling the amplitude of the added signals.

Instead, the selective reflection circuit 969 in document D1 is used to reflect wavelengths coming from circulator 961 and is transparent to the added signals.

And the tunable filters 226 in document D3 serve as wavelength setting control means and in no way for varying the attenuation of the added signals.

Documents D1 and D3 merely show an amplifier (966 in document D1 and 229 in document D3) for globally, and not per channel, i.e. individually, controlling the amplitude of the added signals.

The subject-matter of claims 1 and 5 is therefore new (Article 33(2) PCT).

**4. Problem to be solved and inventive step**

Nothing in the available prior art would lead the person skilled in the art to consider the use of a multichannel wavelength selective filter with variable per channel attenuation for blocking channels not carrying signals to be added to the network or controlling the amplitude of the added signals in order to solve the problem of controlling the signal amplitude of the signals added to the network.

There is apparently no need in the prior art for individually controlling the signal amplitude of the signals added to the network.

Further, no combination of documents D1, D2 (US6285479) and D3 cited in the International Search Report renders the subject-matter of claims 1 and 5 obvious.

The subject-matter of claims 1 and 5 therefore involves an inventive step (Article 33(3) PCT).

**5. Dependent claims**

Claims 2-4 and 6-8 being dependent on one of claims 1 and 5, their subject-matter is new and involves an inventive step (Article 33(2) and (3) PCT).